INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

C-O-N-F-I-D-E-N-T-I-A-L

50X1-HUM

COUNTRY USSR (Moscow Oblast)

REPORT

SUBJECT Moscow Airframe Plant No. 30

DATE DISTR. 13 JUL 1959

NO. PAGES 1

REFERENCES

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Airframe Plant No. 30 in Moscow

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AVIATION PLANT NO. 30 IN MOSCOW

Location

1. The Aviation Plant, subordinate to the Ministry of the Aviation Industry, was known as Plant No. 1 until approximately 1934 when it became Plant No. 30. It was located in the northwest sector of Moscow on approximately the first third of Leningradskoye shosse and was flanked to the south by Botkinskiy proyezd, to the west by a small, experimental aviation plant, and to the north by the installations of the Moscow Central Airport. The plant occupied a perimeter of some 3000 meters partially surrounded by a 2.5 to 3-meter wood fence reinforced by angle irons and metal strips. To the north was a wire fence supported by metal posts, and to the northwest a wooded area which separated Plant 30 from the experimental aviation plant. There was about 200 meters of unfenced perimeter bordering the Central Moscow Airport where the streets leading from several shops left the plant. There was a total of seven plant entrances with the main entrance on Botkinskiy proyezd.

Monolith Building

2. The principal and largest structure in the plant was an "L"-shaped structure called the Monolit (monolith) which was made up of a group of shops, indicated on the attached sketch of the plant layout as Numbers (6) through (8), (14) through (24), and (32) through (40). This was a fire-resistent, reinforced concrete structure of pre-WW II construction. It was divided into seven sections which were in turn divided into shops where non-ferrous metals were cast and stamped; tin, chromium, nickel and cadmium electroplated; tools, gears, nuts and bolts, landing gear, bomb dropping devices, and other parts constructed; and where the aircraft were assembled and mounted with machine guns and aerial cannons. Each of the sections was surrounded by a sort of upper floor or mezzanine with offices for the shop or section chief, timekeepers, draftsmen, first aid stations, toilets, cloakrooms, and where tool supplies and working equipment such as gloves and goggles were kept. The main body of the building had a saw-tooth shaped roof with a sort of terrace between the levels for rain drainage and where the snow had to be removed each winter by the plant personnel.

Plant Installations

3. The margin numbers in parentheses refer to the sketch of the plant layout;

(1) Road to airport.

(2) Wire fence separating the plant from the airport.

(3) Test firing range. This was a 25 x 80 meter area with earth embankments approximately 6 to 8 meters high, and 10 meters thick at the base in the west portion. Machine guns and aerial cannons were tested here before being mounted in the aircraft. Near the firing range was a small shed where the jet engines were tested although they were also sometimes tested in the assembly shop of the Monolit building.

(4) Angle-iron shop. Angle-iron and other items (not further identified) were produced in this 25 x 80-meter, one-story structure, mostly to be sent to other plants.

(5) Wooded area in the northwest corner of the plant separating it from the adjoining experimental aviation plant.

(6) Secret Monolit assembly section. This occupied some 60 x 400 meters, had a very high, convex-shaped glass roof and was the largest section of the Monolit building. The aircraft were assembled and prepared for testing in this shop which was a restricted area.

(7) Monolit riveting and finishing section. This 40 x 250 meter section of the Monolit was equipped with riveting machines, and some parts of the aircraft were finished prior to being assembled.

(8) Monolit aluminum sheet-stamping section. This section measured 50 x 140 meters.

(9) Asphalt road. This road was used for intra-plant transportation.

(10) Fuselage shop. A one-story, 50 x 150 meter structure.

(11) Dining rooms and kitchens for plant personnel. This was a 30 x 50-meter, very old, wooden structure. It was said that it was to be torn down.

(12) Assembly jig shop. This was a 100 x 180-meter structure where assembly jigs for precision parts were constructed.

(13) Kitchen utensils shop. Kitchen utensils and other unspecified consumer goods were manufactured in this shop which measured 40 x 70 meters.

(14) Monolit passageways. Trucks utilized these passageways separating the various shops of the Monolit.

(15) Monolit-finishing and repair shop. This 18 x 90-meter shop was an auxiliary to the Landing gear shop (35).

(16) Monolit machine shop. This 18 x 90-meter shop was equipped with six large, special furnaces used for the production of landing gear and was auxiliary to the Landing gear shop (35).

(17) Monolit "Elektron" shop. This 90 x 90 meter section of the Monolit was devoted to the working of a metal called "Elektron". This metal burned easily when it was turned on lathes or other friction-producing machines. For this reason, there were always two firemen stationed at the shop door. Although entrance to this shop was strictly prohibited 50X1-HUM

this metal was brought into the plant in the form of small blocks which were later stamped or cast.

(18) Monolit bath shop. In this 20 x 50 meter shop were a variety of baths, 50X1-HUM

(19) Monolit machine shop. This shop measured 90 x 110 meters and was equipped with a large number of machines such as lathes, milling machines, planers, and drilling machines. A laboratory where materials and products were tested was located in this shop.

(20) Monolit stamping-press shop. This 40 x 40 meter shop contained presses of various sizes 50X1-HUM

(21) Monolit electric furnace section. This section was believed to measure 4.5 x 20 meters.

(22) Monolit bath shop. This measured 15 x 30 meters 50X1-HUM

(23) Monolit aluminum sheet and angle section. This 60 x 110 meters shop 50X1-HUM

(23 A) Monolit pattern shop measured 40 x 70 meters.

(24) Monolit foundry. The foundry measured 40 x 40 meters and was believed to work with aluminum. 50X1-HUM

(25) Building under construction. This building measuring some 40 x 60 meters,

(26) Machine shop. This machine shop prepared materials for other plants or for consumption outside the plant. It measured 30 x 50 meters and had been a part of Plant 351 before it combined with Plant 30.

(27) Accounting offices. This was a two-story section of an S-shaped structure which was formerly a part of plant 351, and housed the accounting offices of plant No. 30.

(28) Administration offices. This was a two-story section of an S-shaped building which was formerly a part of plant 351, and housed the administration offices of plant No. 30.

(29) Technical school. This was the four-story, main section of the S-shaped building which was formerly a part of plant 351 and housed a technical school for the training of plant personnel.

(30) Household goods shop. This one-story structure measuring some 100 x 100 meters housed a shop which manufactured parts for beds and other household items.

(31) Heating plant. This measured 40 x 40 meters. 50X1-HUM

(32) Monolit materials storage. In this section measuring 25 x 70 meters, materials for the Landing gear shop (33) were stored.

(33) Monolit Landing gear shop. This shop known throughout in the plant as shop No. 14, measured approximately 85 x 100 meters on its longest sides. Landing gear were manufactured and assembled in this which was equipped with three "Firbus" grinding machines stamped with the trademark of an automobile wheel 50X1-HUM There were some 100 workers on two shifts under the direction of a shop chief, who was a licensed technician, shop foremen who directly supervised the workers, and an inspector who was a woman.

(34) Monolit tool shop. The tool shop was equipped with grinders. This shop measured approximately 20 x 40 meters.

(35) Monolit landing gear-frame shop. The structural parts of the landing gear were manufactured in this shop which measured 30 x 40 meters. A laboratory for testing materials and landing gear was located here.

(36) Monolit aerial arms section. This shop known as Shop No. 11 had formerly been known as Shop No. 2. Aerial weapons such as machine guns, cannons and bomb dropping devices were produced in this shop. The shop measured 60 x 80 meters and was equipped with a special automatic lathe, believed to be Czechoslovakian make. 50X1-HUM

(37) Monolit grinding section. This shop, equipped with grinding machines, was auxiliary to the Instrument and die shop (54).

(38) Monolit unidentified shop. This 20 x 50 meter shop was equipped with machines 50X1-HUM

(39) Monolit unidentified shop. This measured 20 x 60 meters.

(40) Monolit screw and thread shop. This 100 x 110 meter shop was equipped with automatic machinery with electric and mechanical controls for the manufacture of screws, nuts, bolts, threads and small parts. The machinery was completely automatic and lights or bells advised of breakdowns or trouble in the operation.

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(41) Building under construction. This 80 x 150 meter, brick building with a structural metal framework It was to have two floors although the second story had not yet been constructed. It was rumored that the metal baths would be moved here when the building was completed, but it was not known what might occupy the rest of the large building. 50X1-HUM

(42) Machine shop. This measured 30 x 50 meters and probably produced items for use outside of the plant. It had formerly been a part of plant 351

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(43) Machine shops and warehouse. This was a two-story, 50 x 150 meter structure with a materials warehouse and machine shops.

(44) Structural parts shop. Wings, gasoline tanks and other structural parts of aircraft were produced in this shop which measured 50 x 150 meters.

(45) Vehicle entrance. This was for trucks proceeding from the Belorusskiy station.

(46) Railroad entrance. The railroad line led from the Belorusskiy station.

(47) Central warehouse. This was a three-story, reinforced concrete structure which occupied an area of 25 x 100 meters. Tools, bronze, and valuable metals such as mercury were stored here. In addition, each shop had a tool and raw material storage section.

(48) Auxiliary tool and die shop. This was a three-story, 20 x 50 meter building with tool and die, and parts shops which were auxiliary to the Instrument and die section (54).

(49) Sheet aluminum shop. This measured 20 x 150 meters.

(50) Metal bed shop. Metal beds were produced for consumers in this shop which measured 25 x 60 meters.

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(51) Fire service. This was a two-story, 25 x 60 meter structure where the firemen and their families lived. There was also a motor pool for the pump, tank, and ladder trucks. The fire chiefs were from the MVD.

(52) Polyclinic, carpentry and restricted planning sections. This was a three-story, 25 x 180 meter building with the polyclinic on the ground floor. This was staffed by specialists and well-qualified personnel. On the same floor and on the second floor were carpentry and pattern shops, and on the third floor was the projects and planning section.

(53) Water reserve. The water reserve was contained in a structure measuring about 20 meters square and six meters deep, which held approximately 2000 tons of water for emergency use to fight fires. The only pumps known to be used in the plant were those used by the fire service to pump water from this reserve.

(54) Secret instrument and die shops, and research department. This was a two-story, 25 x 150 meter structure of reinforced concrete with a metal and tar-paper roof, and a small basement at each extreme. These basements were used for the storage of broken tools and for carpentry shops. The lower floor contained the die stamping section and employed 250 persons on two shifts; the instrument section employed 450 persons on two shifts, a third of whom were engineers, technicians, and administrative personnel. 50X1-HUM

The upper story contained the new instruments section and a secret planning and research department. Various chiefs and what appeared to be Air Force officers since they came from the Zhukovskiy Academy which was located near the plant by the Dynamo Stadium, attended conferences in this department. 50X1-HUM they came to do research and conduct tests. There was an automatic alarm which sounded a series of bells in the building and in the security stations if anyone tried to enter when the department was closed. In 1954 or 1955, 50X1-HUM apprentice tried to enter the department for an unknown reason, setting off the alarm and he was arrested.

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(55) Transformer station. This was a 10 x 10 meter building which was one of the two transformer stations in the plant.

(56) Forge. This measured 20 x 25 meters.

(57) Iron works. This was a one-story, 25 x 130 meter structure equipped with stamping presses, hammers, and iron castings.

(58) Transformer station. This was a 12 x 20 meter building which was one of the two transformer stations in the plant.

(59) Loading platform and storage area. The loading platform was equipped with a crane and immediately adjacent was a 30 x 100 meter storage area where materials entering the plant or those packed for shipment were kept.

(60) Supply section. A three-story, 20 x 50 meter structure not further identified.

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(61) Sheet aluminum shop. A 20 x 150 meter shop which performed the same functions as the other sheet aluminum shop (49).

(62) Consumer goods administration offices. This was a two-story, 20 x 120 meter structure of recent construction in which was located the administration offices for the consumer goods production of the plant. The entrance to the building was on Leningradskoye shosse and it could not be entered from the plant area.

(63) Railroad entrance. A siding which came from the Belorusskiy station and went to the plant lumber yard entered here.

(64) Lumber yard. This was a 150 x 350 meter walled-in area where the lumber for the plant was stored. It had a railroad siding and was the largest storage area in the plant.

(65) Railroad siding. This siding extended to the Leningradskoye shosse boundary of the plant.

(66) Coal dump. This was a 25 x 150 meter area, located by the side of the railroad siding, where coal for heating, the ironworks, and the forge was stored.

(67) Heating plant. This measured 25 x 80 meters and provided heating for a part of the plant.

(68) Main garage, parking area, and aircraft ejector-seat testing area. A 20 x 60 meter structure housed the main truck garage of the plant and a small shop for light repairs. The automatic ejector seats were tested in the garage with sacks of sand weighing approximately the same as a person in order to check the construction and assembly. Adjacent to the garage was a parking area for trucks.

(69) Vehicle entrance. This entrance was on Leningradskoye shosse and entrance and departure was somewhat restricted at this gate.

(70) Vehicle and personnel entrance. This entrance was for vehicles and personnel coming from Botkinskiy proyezd and Khoroshevskoye shosse.

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(71) Abandonned building. [redacted] this old building, measuring some 25 x 25 meters, had served as living quarters but was no longer in use.

(72) Aluminum riveting shop. This was a three-story, 70 x 100 meter shop where various aluminum parts were riveted.

(73) Auxiliary shop. This was a one-story, 30 x 100 meter structure, not further identified.

(74) Gasoline and oil depot. This 10 x 10 meter structure located in the truck parking lot (68) contained the gasoline and oil reserves for the plant vehicles.

(75) Light vehicle garage. This formerly had been the garage and clinic of plant 351 before it had combined with plant 30, but was since used only as a garage for light vehicles, motor scooters, and motorcycles of the plant personnel.

(76) Plant administration. This was a three-story, 15 x 75 meter building which housed the offices of the plant administration, the Party, the Union and the accounting offices. Each shop or section also had an administration office.

(77) Personnel entrance. This was the former personnel entrance for plant 351.

(78) Personnel identification section. Photographs and personal information from the workers were taken in this small building.

(79) Main vehicle entrance. This had formerly been the vehicle entrance for plant 351.

(80) Scrap dump. Scrap iron, waste products, and old or damaged aircraft were kept in this area. Other areas used for this same purpose were portions along the north and east sides of the Monolit and the area between the Assembly Jig Shop (12) and the Household goods shop (30).

(81) Apprentice school. This two-story 15 x 80 meter structure housed an apprentice school for young workers.

(82) Main personnel entrance and security office. Gardens were located beyond the gates.

(83) Restaurant. This was a two-story E-shaped building measuring 30 x 100 meters with two rotundas in the south portion. It housed the plant restaurant and was also said to house the plant club where parties and conferences were given.

(84) Living quarters and esplanade. These were four or five-story living quarters occupying an area of 20 x 50 meters. Facing the quarters was an esplanade that was formerly the entrance to plant 351.

The margin letters in parentheses also refer to the attached plant layout: 50X1-HUM

50X1-HUM

(A) Small, experimental aircraft plant. It was not known if this plant had a number, but it was believed that experimental aircraft models designed and constructed here.

(B) Moscow central airport installations.

(C) Waste dumps within the plant area. Some old-model aircraft were dumped here.

(D) Eastern boundry of the plant, bordered by Leningradskoye shosse.

(E) Botkinskiy hospital.

(F) Botkinskiy pereulok. This was a secondary entrance to the plant which until 1948 or 1949, had streetcar lines which entered the plant for the purpose of transporting the aircraft engines which came from plant 45.

(G) Botkinskiy proyezd. This was the principal entrance to the plant and ran from Leningradskoye shosse to the Botkinskiy hospital. It had also been the principal entrance to the former experimental plant 351. It was tree-lined, from 25 to 30 meters wide, and had two streetcar lines by which material was sometimes transported.

(H) Private dwellings. Some of the technical personnel of the plant and of the Botkinskiy Hospital lived in these dwellings.

(I) Plant sports facilities. A football field and a velodrome were located here.

Products

4. The plant manufactured a bi-motor propeller-driven, civilian passenger transport, "Iliusin 12", so named after its inventor, and a two-engine, light, jet bomber, capable also of serving as a fighter because of its high speed, as well as some other experimental models 50X1-HUM a four-engine jet aircraft was being manufactured. the "Fly" or "Flea" aircraft was in production. The light bomber that was in production carried a crew of at least four and was equipped with aerial cannons and machine guns. did not know the power of the engines except that the aircraft was capable of flying with only one of its two engines. whether it was equipped with lighting or photographic equipment since this information was restricted, but such equipment would probably be installed at Ramenskoye Airfield, (N 55-34, E 38-14) some 45 kilometers from Moscow, where the completed aircraft were flown by military pilots. the strict security measures that were taken at this airfield 50X1-HUM Certain consummer's goods, such as metal beds and kitchen utensils were manufactured at this plant.

Production

5. Aviation Plant No. 30 made all of the component parts of the aircraft except for the engines which were shipped from Plant No. 45. The large parts of the aircraft were made of aluminum while certain of the small parts were made of a special metal called "Elektron". See point (17) for description of this metal. There were some 108 shops in the plant 50X1-HUM and some of these operated with modern automatic machinery, controlled electrically or mechanically but not, electronically. The machinery was almost entirely foreign, especially of Czechoslovakian make and in good condition due to the careful maintenance.

Production Stimulus

6. There was a permanent, joint, plant and ministry, technical committee continually studying the possibility of increasing production, by varying work methods and quotas in some of the shops, and reporting successful results to the ministry so that the norms could be revised. 50X1-HUM production figures were falsified, and there did not seem to be any mechanical deficiencies the organization of the work, especially outside of the Monolit, was such that production was lost in transporting parts from one shop to another due to inadequate transportation facilities. New shops were under construction to centralize the production of related parts. During the reconversion to a new model, a process of some two months, the key shops were short of work; but the others, especially those producing consumer's goods, followed their normal routine. In the nonferrous and soft metals sections, there was a high percentage of rejects 50X1-HUM many of these rejects could be utilized in the consumer production.

Testing Aircraft

7. In addition to the testing of the components such as weapons, bomb dropping devices, engines, and ejector seats already described under the appropriate shop or area, military personnel in each of the shops supervised the production, and plant engineers and military personnel supervised the assembly. The completed aircraft was then flight-tested at the airfield while military and plant observers watched from the ground. The test pilot filed a report of the flight and answered questions pertaining to the performance of the aircraft; the air force then decided whether or not it would accept delivery. The test pilots were famous and there had been many casualties among them. One of the most famous of these pilots 50X1-HUM had flown Molotov in 1943, but afterwards had several accidents; the most serious in 1952 when he broke both of his legs testing a jet aircraft. He returned to test flying and was 50X1-HUM killed while testing a new type of jet aircraft. Another famous test pilot was named Kokinsky.

Tank Trucks Seen in Plant Vicinity

8. large tank trucks with Czechoslovakian 50X1-HUM trailers enter the plant by the west gate and proceed along the road that ran between the Monolit and the railroad siding to the east portion of the plant and possibly to the airfield. 50X1-HUM Soviet, 3 to 5-ton trucks carrying a small vertical tank with a dome-shaped top from which escaped a sort of white smoke. These tanks were equipped with pipes and valves on the sides that were covered with a sort of frost the tanks 50X1-HUM carried liquid oxygen or ammonia.

Raw Materials

9. The raw materials used in the plant included a large quantity of non-ferrous metals such as duralumium, "elektron", aluminum, nickel, bronze, cadmium, zinc, chromium, silver, copper, brass, and mercury for control devices as well as special steels and semi-steels. A large quantity of wood was employed, coal for heating and the forges, diesel oil for some of the furnaces petroleum, gasoline, mazut, and alcohol were used. reserves of aviation fuel 50X1-HUM

Water and Electricity Supplies

10. The plant used the regular city water supply which came from reserves some 35 to 40 kilometers north of the city. Electricity was supplied by the city and at certain times 50X1-HUM electrical failures had stopped the machinery. Due to the fact that the plant had consumed more than its quota of electricity, current was cut off at the end of the year for an extended period of time. There were also infrequent occasions when current was short.

Packing

11. Products for the plant's own use were wrapped in paper with an appropriate label designating the characteristics of the piece; while products that were to be shipped out were crated in boxes.

All packing was careful. Aluminum parts, both large and small, were carefully packed to avoid blows or scraping, cushioned with jute, sawdust, or vegetable fibers; especially wings, rudders, ailerons, and cockpits which were transported by truck to other points within the plant. Small parts were wrapped in paper with paper reinforcements at the corners or placed to protect the delicate parts, and packed in boxes if they were to leave the plant. Steel products were greased and the tubular, metal, bed frames were paper wound to prevent scratching or denting. All manufactured products carried a serial number and the consumer goods were sent directly to the establishment from where they were to be sold.

Railroad Transportation

12. Two, parallel, standard Soviet guage railroad sidings, connecting with the main line at Belorusskiy station, entered the plant to the west. The northernmost line was double-track and entered the plant near the metal bed shop, while the other line, some 30 meters to the south, was double track only to the plant boundry and entered near the lumber yard. The plant locomotives appeared to be the ordinary type, and the platform and gondola cars varied from 70 tons to less than 40 tons with some smaller and older cars. Tank cars entered the plant with gasoline and diesel oil and perhaps other fuels since some of those cars were very dirty as though they contained grease. Railroad traffic was continuous during the day 50X1-HUM
The majority of the shipments to the plant was by railroad, especially for heavy and large items such as wood, coal, fuels, and steel. The quantities shipped out of the plant varied and could not be specified. The cars were side-loaded and cranes were used for large items.

Highway Transportation

13. The plant had access to Leningradskoye shosse, a tree-lined avenue over 80 meters wide, by way of Botkinskiy proyezd, also tree-lined and some 25 meters wide. Another highway, Koroshevskoye shosse, with a width of some 20 meters, passed to the west of the plant behind the Botkinskiy Hospital and had two connecting streets; one which went in front of the hospital and entered the plant to the southwest, and another which went behind the hospital and entered the plant near the railroad sidings. All of these roads were asphalted and well-drained except for where Botkinskiy proyezd entered Leningradskiye shosse where pools were formed impeding entrance to the plant each time it rained or thawed. Leningradskoye shosse had a large capacity for traffic and possessed only one grade where a ramp formed a railroad overpass. The plant owned approximately 150 trucks of varying makes and capacities, including 3 to 5-ton Zil trucks, some 8-ton, trucks, and light vehicles. 50X1-HUM
Truck traffic was frequent during the day The principal items transported by truck were the jet engines from plant 45, bronze, copper, and small parts delivered to other plants. Tank trucks, not belonging to the plant, delivered fuel.

Working Conditions

14. Employees worked an 8-hour day and a 46-hour week, with more workers employed on the first shift than on the second. 50X1-HUM
Sanitary conditions were good and all shops were well-ventilated and sunlit with the exception of one shop with artificial light.

Work clothes were kept in good condition and care was taken to see that protective glasses were worn by welders and others whose eyes might be endangered, as well as other precautions such as the careful instructions issued to those handling acids. There had been no strikes but there were occasional complaints about wages and work quotas. These were handled within the plant without resorting to higher authorities. It was not known if there were official priveleges, but unofficially they existed, at least for those with political or union positions. There was always some absenteeism because of the size of the plant, and workers who repeatedly missed work were dismissed.

Security

15. The plant had about 150 guards, many of whom were women, with about 40 guards working each shift, which was changed, it was believed, every 4 hours. There were sentry boxes about every 100 meters along the plant wall, and other guards were stationed at the gates and in the storage areas, and had been seen in various sections of the Monolit as well. The plant had guards along the airfield border although the airfield had its own special guards. The guards carried guns and pistols and used dogs at night when the guard force was believed to be larger. A pass, bearing name, photograph, shop, and number, was needed by each worker in order to enter the plant. A timekeeper in each shop collected the passes on entering and returned them on leaving. Written permission from the shop chief was needed to leave the plant at other times. Some shops could be entered freely while others such as the assembly shop, the "Elektron" shop and some laboratories were strictly prohibited. There were no air raid precautions within the plant.

Sabotage

16. There was rumored to have been sabotage in certain of the key shops of the plant. One Sunday in the summer of 1953, the rods, springs, and parts of the shock absorbers of a number of finished landing gear in the Landing Gear Shop had been damaged by hammer blows and chisel cuts rendering them useless. The police made intensive investigations and strict security measures were taken for some time, but it was not known if the responsible parties were caught or who they might have been. [redacted] there had been other acts of sabotage both before and after this. 50X1-HUM

Organization and personnel

17. The plant organization included many air force technicians. The plant had, in addition to the general director, other special directors such as the co-director or assistant director of planning who worked under the instructions of the ministry, a director of consumer goods who alone handled this branch, and a director of supply and distribution. The chief engineer was in charge of all plant engineers such as the shop engineers, the planning engineers, the aeronautical engineers and the engineering specialists in piston motors, jet turbines, non-ferrous metals, casting, forging and aerodynamics. There was said to be some 3000 workers, the majority of whom were specialists since only the security force, the cleaning personnel, and the caretakers of the machinery and the tools were not specialists. There were some 160 Spaniards in the plant until 1947 when their number was reduced to

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some 50 or 60 of the younger ones and some 3 or 4 of the older and especially well-qualified workers who were retained to maintain political and social control over the others. There were German prisoners in the plant until 1950, constructing roads within the plant, repairing plant buildings and the airfield landing strips, and repairing the access roads, especially Khoroshevskoye shosse. 50X1-HUM

No convicts were known to work at the plant persons were sent to the plant from higher positions as a punishment. a 47 year old army colonel, former pilot for the Soviet leader. Kaganovich, came to work in the Landing Gear Shop. 50X1-HUM he had been punished for drinking too much.

Administrative personnel

18. 50X1-HUM

(A) Voronin Pavel Andreich. He had been plant director since about 1924 when it was plant number 1.

(B) Gordon. He was director of construction. 50X1-HUM

(C) Ganozhin. He was the security director. 50X1-HUM

(D) Ovechkin. 50X1-HUM Union chief. 50X1-HUM

(E) Petr Semyonych Romanov. chief of the Landing Gear Shop.

(F) Khrushevskiy. director of the consumer's goods production. 50X1-HUM

(G) Stroyev. chief of the instrument shop

(H) The chief engineer was Russian His name was unknown.

(I) The financial director 50X1-HUM His name was unknown.

50X1-HUM

Rumored Change of Location

19. the plant was to be dismantled and a sports park and swimming pool were to be constructed in its place. Heads of the Spanish collectives and the Spanish labor union had sounded the workers to see if they would be willing to accept work in an unspecified plant in the Volga region. It was known that in 1950, a large aviation combine had been put into operation in Kuybyshev (N53-12, E50-09) successful experimental models developed by plant 30 were being mass produced by this combine. it was possible in a plant the size of plant 30, that 1500 workers could have been transferred without being noticed by more than their close friends and fellow workers. workers from Kuybyshev and from Tashkent (N41-20, E69-18) where an important aircraft plant had recently been modernized. These workers remained at the plant from one to three months in order to learn specialties in the construction of jet aircraft.

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Attachment II — 50X1-HUM

[redacted]

AIRFRAME PLANT NO. 30, MOSCOW

Location and Identification

1. [redacted] Airframe Plant No. 30 on Leningradskoye shosse and Botkinskiy pereulok adjacent to the Central Airfield in Moscow, Leningradskiy rayon. Since 1951, the territory bordering Leningradskoye shosse was absorbed by Plant No. 30. Prior to 1951, this territory belonged to Aircraft Testing Plant No. 381 (Aviatsionnyy Opytnyy zavod No. 381). The installations of Plant No. 381 were remodeled and geared for subassembly of aircraft produced by Plant No. 30. Airframe Plant No. 30, [redacted] was subordinate to the Ministry of Aviation Industry and its director was Pavel Andreyevich VORONIN. 50X1-HUM 50X1-HUM

2. During W.W.II, the site of this plant was occupied by Airframe Plant No. 1, whose equipment and personnel were evacuated to Kuybyshev. Later, the airframe manufacturing equipment and the number of the plant (no. 30) were moved from Kharkov to the present location in Moscow. [redacted] 50X1-HUM

[redacted]

3. [redacted] this plant might be moved to Voronezh (N 51-38, E 39-12). [redacted] construction workers were erecting many buildings near the Voronezh Airfield [redacted] specific location of the airfield nor the target date for the plant relocation. [redacted] the present expansion of buildings at Plant No. 30 did not substantiate [redacted] relocation of the plant. 50X1-HUM 50X1-HUM

Plant Layout

4. Refer to page 17, an overlay of the Moscow Airframe Plant No. 30, [redacted] Scale 1:17,400, [redacted] located the following sites: 50X1-HUM

Point 1. Main runway of Moscow central airfield.

Point 2. Secondary runway.

Point 3. Perimeter track of the Central Airfield.

Point 4. Two hangars.

Point 5. Entrance to the Central Airfield.

Point 6. Streetcar stop "Strelnaya" (Ostanovka Strelnaya).

Point 7. Building of the Aviation Academy imeni Zhukovskogo.

Point 8. Three-story building of Aviation Academy imeni Zhukovskogo. This building contained classrooms and student officers' club.

50X1-HUM

Point 9. Stadium "Dinamo".

Point 10. Streetcar stop "Stadion Dinamo".

Point 11. Entrance to Plant No. 30.

Point 12. Leningradskoye shosse.

Point 13. Plant building. This was a single-story building measuring approximately 120 x 40 x 12 meters. The floor space of this building was occupied by Shop No. 37, Fuselage Assembly Shop. The eastern section of this building contained offices of shop bookkeeping department, the technical inspection section (B.Ts.K. - Byuro Tsekhovogo Kontrolya), the labor and pay office (B.T.Z. - Byuro Truda i Zarplaty), shop technical section, political indoctrination section, shop cafeteria and offices of the shop chief and his assistant. Shop No. 37 was equipped with six fuselage built up jigs and unknown number of jigs for the tail section. In 1951, the floor space of this shop was used for the final assembly of IL-28 aircraft while Shop No. 39, Final Assembly Shop was being renovated.

50X1-HUM

Point 14. Narrow road.

Point 15. A single-story plant building [redacted]

Point 16. A single-story plant building. This shop (number unknown) produced small fuselage parts and metal bins for storing stock supplies.

Point 17. A single-story building. [redacted]

50X1-HUM

Point 18. A single-story building.

Point 19. A single-story building. The floor space of this shop (number unknown) was used for static tests of aircraft parts. In addition to testing IL-14 aircraft components, the technicians tested a light twin-jet bomber produced at an unidentified aircraft plant. [redacted] 50X1-HUM

[redacted] it was not the IL-28 type aircraft.

Point 20. A new plant building. This was a single-story, brick building, approximately 70 x 50 meters in area dimension. In October 1956, the frame of this building was completed except for the internal finishing work. One section of the floor space contained galvanizing tanks, [redacted] 50X1-HUM

[redacted] the Shop No. 53, Jig Construction Shop, was to be moved to this building from its present location.

Point 21. Central Warehouse No. 5 (Pyatyy Tsentralnyy Sklad). This was a four-story brick building approximately 60 x 20 meters in area dimension. The ground floor was used for storing steel

rods and ferrous metals (Chernyy metall). On the second floor there was an unknown shop where the Duralumin sheets were cleaned and checked for any flaws. The third floor contained a storeroom for leather jackets and trousers, fur caps, and boots for flying personnel. The fourth floor was used as a storage area for unknown materials.

Point 22. Plant garage. This was a single-story, brick building approximately 40 x 15 meters in area dimension.

Point 23. Plant administration building. This was a four-story, brick building approximately 60 x 12 meters in area dimension. The ground floor contained the central payroll section, the personnel hiring and release section, the documents photo section, and other offices. The second floor contained the main bookkeeping department, the office of the assistant director, and other unknown offices. The offices of the plant director, chief engineer, and chief mechanic were located on the third floor. An unknown number and type of offices were located on the fourth floor of this building.

Point 24. Plant building. This was a three-story, brick building approximately 60 x 10 meters in area dimension. The plant policlinic was located on the ground floor until 1954, at which time it was moved to another building (point 40, page 17). In 1956 the floor space had been reconverted into living quarters for plant workers. The second floor was used by the plant aviation technical school (Aviatsionnyy Tekhnikum) and technical library. The third floor contained living quarters for plant workers.

Point 25. Location of a 10-year school. This was a four-story brick building approximately 50 x 12 meters in area dimension. This school building was completed in 1953 and was not a part of the plant area.

Point 26. Botkinskiy pereulok.

Point 27. Streetcar stop "Stadion Yunykh Pionerov".

Point 28. Stadium "Yunykh Pionerov".

Point 29. Bicycle race track (Velodrom).

Point 30. Begovaya ulitsa.

Point 31. Hippodrome.

Point 32. Apartment house for plant workers. This was a five-story brick building.

Point 33. Apartment house for plant workers. This was a five-story brick building; the ground floor contained clothing material stores.

Point 34. Streetcar stop 'Begovaya'.

Point 35. Vtoroy Botkinskiy pereulok. (The second Botkinskiy pereulok).

Point 36. Five-story apartment building for plant workers.

Point 37. Same as point 36 above.

Point 38. Five-story apartment building. It was constructed in 1950 for the artists of Moscow theaters, however, the artists did not like the location and the building was turned over to Plant No. 30 for workers' quarters.

Point 39. Ten-year school. This was a five-story brick building.

Point 40. A new building. This building was completed in 1953; its main section was nine stories high topped with three stories of smaller area dimensions. The plant policlinic was located on the ground and second floors. The remaining stories were used as living quarters for plant workers.

Point 41. Same as point 36 above.

Point 42. Streetcar stop.

Point 43. Plant Restaurant (Fabrika Kukhnya). This was a four-story brick building approximately 60 meters long and 15 meters wide. This building contained numerous dining halls and cafeterias. Each dining hall had seating capacity for 350 people. The operating hours were from 0600 to 0900 hours for breakfast, from 1100 to 1500 hours for lunch, and from 1930 to 2030 hours for the second shift. Some cafeterias were open from 1100 to 2300 hours.

Point 44. Main entrance for plant workers.

Point 45. Oxygen storehouse.

Point 46. Small electric substation.

Point 47. Plant building. This was a single-story brick building approximately 50 x 15 meters in area dimension. This building contained Shop No. 61, Machine Repair Shop, and Shop No. 64, Plating and Eletric Motor Repair Shop, for the repair of electric motors, and installation and maintenance of electric systems. The above shops were formerly Shop Nos. 30 and 31.

Point 48. Aviation Trade School. This was a five-story brick building 50 x 10 meters in area dimension. The ground floor contained workshops equipped with various machines for practical training. The courses were of two-year duration for youths ranging from 14 to 17 years in age. The classes were conducted in the daytime and there were approximately 300 pupils.

During the second year the pupils of this school gained practical experience in various shops of Plant No. 30. During this period the plant paid the trainees up to 150 rubles a month. In the event a trainee earned more than this amount, that portion over 150 rubles was transferred to the account of the Trade School. The first year trainees were paid 40 rubles a month above room, board and clothing costs. Upon completion of this school, the trainees were employed by Airframe Plant No. 30.

Point 49. Location of Shop No. 3. This was a three-story building approximately 60 x 20 meters in area dimension. Shop No. 3 was engaged in machining fuselage longerons and bulkheads, assembly of engine nacelles and gauge work (Lekalnoye delo).

Point 50. Plant building. In this building reenforced concrete blocks for building foundations were manufactured.

Point 51. Boiler shop. This was a single-story brick building approximately 40 x 25 meters in area dimension. Formerly, this was Shop No. 40 [redacted] changed to Shop No. 100. The fuel used in this boiler shop was mazut (black oil). 50X1-HUM

Point 52. Shop No. 1. Forge shop and heat-treating section.

Point 53. A two-story brick building. The ground floor contained Shop No. 55 (old number 24) which was the Punch Press Shop. The second floor was occupied by Shop No. 56 (old number 9) which was the Machine Tool Manufacturing Shop.

Point 54. Main plant production building. For further details refer to paragraph five and page 8 .

Point 55. Shop No. 39 (formerly number 12), Final Assembly Shop.

Point 56. Aircraft gun pit (TIR). During the production of IL-28 the aircraft machine guns were tested with live ammunition in this area.

Point 57. Concrete apron. In this area the aircraft engines of IL-14 were tested on test stands prior to installation in the aircraft.

Point 58. Boiler house and compressor station. This boiler house used coal for fuel.

Point 59. Location of Shop No. 35. This was a single-story brick building 60 x 30 x 10 meters in dimension. At the time the plant produced IL-28 aircraft, the wing center sections (Tsentroplan) and the fuselage nose sections were assembled in this shop. After the phase-out of production of IL-28 aircraft [redacted] 50X1-HUM

Point 60. Plant building. It was three-stories high, and approximately 60 x 10 meters in area dimension. The basement and the ground floor contained Shop No. 7 which produced steel templets (Shablony) for aligning the wing ribs, fuselage bulkheads (Shpangoty) and plywood templets for cutting out ribs of the wing jig. On the ground floor, the plant central dispensary and the feeder set for public loudspeakers (Radiozel) were located. The second floor contained the main engineering-designing department (Glavnyy otdel konstruktorov). The third floor was used by the photocopying section for aircraft blueprints, and by the secret section where all aircraft blueprints were stored.

Point 61. Electric sub-station.

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Point 62. Fire station.

Point 63. Plant building. It was two-stories high and approximately 50 x 15 meters in area dimension. [redacted] this shop was engaged in production of seats for passenger aircraft. The other non-aeronautical items produced by this shop consisted of metal milk cans of 40 liter capacity, and metal bins for storing supply parts. 50X1-HUM

Point 64. Entrance gate to the Experimental Plant No. 51.

Point 65. Experimental Plant No. 51 (Opytnyy Zavod No. 51). For further details on this plant refer to paragraph 18.

Point 66. Foundry and molding shop. This was a single-story brick building measuring about 50 x 15 meters in area dimension.

Point 67. General appliances shop (Shorpotreb). The single-story brick building was constructed in 1952. This shop was engaged in the production of non-aeronautical appliances such as aluminum folding beds, steel spoons and forks, kerosene stoves, ashtrays, children's toys and aluminum rocking chairs. 50X1-HUM

Point 68. Tank Repair Plant (Remontnotankovyy Zavod). [redacted] a tank repair plant.

Point 69. Vtoraya Begovaya ulitsa (the second Begovaya ulitsa).

Point 70. Streetcar stop 'Bagankovskiy most'.

Point 71. Bagankovskiy most (bridge).

Point 72. Railroad line leading to Belorusskiy vokzal, (Belorussian railroad station) in Moscow.

Point 73. Khoroshevskoye shosse.

Point 74. Railroad spur leading into Plant No. 30 territory.

Point 75. Road.

Point 76. Military housing area (Voyennyy gorodok).

Point 77. Refrigeration and Ice Cream Plant No 7. This was a four-story brick building. [redacted] 50X1-HUM where ice cream, butter, canned frozen fruits, and cold-stored sausages and meat were prepared.

Point 78. Administrative building, Refrigeration Plant No. 7. This was a two-story brick building containing living quarters on the ground floor and offices on the second floor.

Layout of Shops in the Main Production Building

5. The main production building (point 54, page 17) contained numerous support type shops and a wing assembly shop. Refer to page 18 , [redacted] sketch of shops layout in the main production building, 50X1-HUM the following legend:

Point 1. Boiler house and compressor station. (Same as point 58, page 17).

Point 2. Shop No. 53, Jig Construction Shop (for further details refer to paragraph six and page 11).

Point 3. Crusher for metal filings.

Point 4. Shop No. 36. The assembled aircraft were delivered to this shop from Shop No. 39 for varnishing and for repair of minor defects.

Point 5. Entrance to Shop No. 36. Aircraft were delivered through this entrance to Shop No. 36.

Point 6. Shop No. 36. Workers in this shop assembled wings and ailerons, and installed engine nacelles.

Point 6A. This section of the shop contained jigs for final assembly of wings. Here the engine nacelles were also installed.

Point 6B. Frame assembly section for wings, ailerons, and wing panels.

Point 6C. Storage space for wing component parts.

Point 7. Anodation-galvanization shop.

Point 8. Shop No. 5. This shop was equipped with hydraulic presses and drop hammers for cold pressing of Duralumin parts for the fuselage and engine nacelles.

Point 9. Support shops and storerooms.

Point 10. Shop No. 21. (Tsekh avtomatov). This machine shop produced various bolts, nuts, washers and rivets.

Point 11. Building aisles.

Point 12. Shop No. 11 (formerly Shop No. 2). This was a machine shop for machining landing gear parts, aircraft control rods and control sticks.

Point 13. Shop No. 14. The workers of this shop polished landing gear parts and performed final assembly of aircraft landing gears. From this shop the assembled gears were forwarded to Shop No. 39.

Layout of Shop No. 53, Jig-Construction Shop

6. Shop No. 53 (formerly Shop No. 8), Jig Construction Shop, was located in the main production building (point 54, page 17). Shop No. 53 was approximately 80 x 40 x 10 meters in dimension. The layout of the workshops are presented as they existed during 1955 and 1956. Refer to page 19 , sketch of the Shop No. 53 layout. the following legend for this sketch:

Point 1. The main entrance to Shop No. 53.

Point 2. Area of Workshop No. 8 (Masterskaya). This workshop employed about 15 welders, in one shift. Here jig beam pieces and angle brackets were arc welded and gas welded.

Point 3. Area of Workshop No. 2.

Point 3A. In the center of this section there was a plate jig (Konduktornaya plita) on which the wing jig ribs (Rubilniki) were lined with a templet. Refer to page 11 for further details on the wing jig rib. On this plate jig the workers also fitted the brackets (Vilka) to the wing jig rib.

Point 3B. This section contained two stand machines (Stender stanki) for cementing the brackets into the steel socket (Stakan) of the wing jib rib and for fitting the steel socket into the wing jig beam (Balki Shtapelya).

Point 4. A small section of Workshop No. 1. This section contained two boring machines for drilling reference holes in the plate jig. This section employed four workers during two shifts.

Point 5. Shop administrative room. It contained the offices of the shop chief, his assistant and secretary; there were also the offices of shop bookkeeping department, technical section (Tekhnicheskiy otdel), shop technical inspection office (B.Ts.K.- Byuro Tsekhovogo kontrolya), labor affairs and payment office (B.T.Z. - Byuro Truda i Zarplaty) and the planning-dispatching office (P.D.B.-Planovoye dispetcherskoye byuro).

Point 6. Area of Workshop No. 5. This workshop constructed various jigs for aircraft wings. For further details on jigs refer to paragraph nine.

Point 6A. Desk for the foreman of Workshop No. 5.

Point 7. Shop aisle approximately four meters wide.

Point 8. Area of Workshop No. 7.

Point 8A. Foreman's desk of workshop no. 7.

Point 9. Area of Workshop No. 6.

Point 9A. Foreman's desk of workshop no. 6.

Point 10. Area of Workshop nos. 3 and 4.

Point 10A. Foreman's desk of Workshop Nos. 3 and 4.

Point 11. Area of Workshop No. 1.

Point 11A. Foreman's desk of Workshop No. 1.

Point 11B. Storage area for steel brackets, jig beams(Shveller) and steel pipes for mock-ups.

Point 12. An aisle leading to the crusher for metal filings.

Point 13. Area of the machine and electric motor repair workshop.

Point 14. Crusher for metal filings . (Drobilka)

Plant Production Chronology

7. the total production figures or other technical data on aircraft produced at this plant, however, a general chronology of plant production since 1945. The production of IL-12 transport aircraft was phased out in November 1945 but the initial date of production was not known In May 1945 various shops of the plant began preparations for the production of the IL-28 aircraft which was a twin-jet light bomber designated by the plant as Izdeliye-5 (Article 5). The first three prototypes of IL-28 aircraft were completed by May 1946. Series production of this bomber reached its peak in 1953 when the monthly output was from 70 to 80 aircraft a month . In 1954 the production of bombers tapered off until the final phase-out at the end of 1954. The production of various jigs for IL-14 transport aircraft began in February 1955 and the required sets of jigs were completed by October 1955. the airframe production of IL-14 aircraft began in October 1955, and continued until October 1956 this plant produced three to four IL-14 aircraft a day but he was unable to substantiate this figure. The wing assembly.

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shop produced eight wings a day in 1956. This figure was based on personal observation while visiting the wing assembly shop on several occasions.

Plant No. 30 was to phase out the production of IL-14 aircraft and to begin production of IL-18 transport aircraft for Aeroflot. the target date for the change-over of production. IL-18 aircraft were being produced at the Airframe Plant No. 40 in Kuntsevo (N 55-44, E 37-27), Moscow Oblast. Plant No. 30 was to be engaged in the production of transport type aircraft only.

8. a small group of plant workers was engaged in the repair of IL-12 aircraft including engine change. The repairs were made outdoors near the final assembly shop building. Most of the transports(IL-12) were flown in from Poland and Czechoslovakia for major repairs and upon completion, they were flown out using the plant airfield.

Production of the Jig Construction Shop

9. Shop No. 53 was engaged in the production of fuselage build-up jigs, various types of wing jigs, tail section jigs and mock-ups for the wing and fuselage. The following types of jigs were made at Workshop No. 5 for the assembly of wings:

a. Small build-up jigs for fitting and joining spars and ribs (Lonzheronnyye). A set of spar build-up jigs consisted of two jigs for the front spars (top and bottom) and two jigs for the trailing edge spars (top and bottom). 50X1-HUM

b. Vertical jigs for wing panel assembly. The jig for the assembly of the top section of the panel was designated by number 2020 and the jig for the bottom panel was designated by No. 2031. Sixteen jigs comprised the total of two sets for the wing panel, i.e., four top panel jigs and four bottom panel jigs for the right wing, and four top panel jigs and four bottom panel jigs for the left wing.

c. Plane jigs for wing panels. The numerical designation for this jig was 2062. On this flat jig, the top and bottom sections of the wing panels were fitted and joined together. The set was comprised of four jigs, two right and two left wing panel jigs.

d. Build-up jig for the leading edge of the wing. One set of jigs comprised of two leading edge jigs, one for the right and one for the left panel. 50X1-HUM

e. Major assembly wing jig. This workshop produced six major assembly wing jigs, three jigs for the left and three for the right wing.

Workshops Nos. 6 and 7 made the fuselage build-up jigs. For each new aircraft put into production these workshops made six fuselage build-up jigs from steel tubes. Workshops Nos. 3 and 4 produced build-up jigs for the tail section and the nose section of the aircraft.

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Construction of Mock-ups (Maket)

10. Shop No. 53 constructed various mock-ups in addition to jigs. These mock-ups were made of steel tubes which were gas welded. Workshop No. 5 constructed mock-ups for ailerons, and Workshop No. 7 constructed one mock-up for the fuselage jig. Both types of mock-ups were constructed in conformity with the blueprints. Workshop Nos. 5 and 7 also made 'master plita' (type of mock-up) for the wing and the fuselage which were constructed with the guidance of a templet.

Jig Construction Data

11. The steel support columns and horizontal beams (Shveller) were received from an unknown plant in lengths of one to one and one-half meters. The beams and support columns were U-shaped and varied in width. The beams for the major assembly wing jig were 30 centimeters wide and were marked with the stock number 30. The beams for the small build-up jig for fitting and joining spars and ribs were 28 centimeters wide (stock number 28). The steel support columns and horizontal beams for the major assembly wing jig were fastened with bolts and filled with carbide glue. The horizontal beams were heated by acetylene torches in the center part to eliminate any deviations from their plane. The attachment fittings between the support columns and beams were arc-welded. The tolerance for the rib of the major assembly jig was zero to minus 0.05 millimeters. For the entire jig the tolerance was zero to 2.0 millimeters. The fuselage, wing and tail section jigs were not aligned at Shop No. 53, but at the respective fuselage and wing assembly shops. However, optical aligning was performed by the workers from Shop No. 53 after the jig was completely assembled and installed at the assembly shops. The workers from Shop No. 53 inspected the jigs monthly as a preventive maintenance (Tekushchiy remont) procedure. Major overhaul (Kapitalnyy remont) was performed once a year unless monthly inspections showed the need for major overhaul. [redacted] it took two months to produce the minimum number of essential wing jigs for any new aircraft. The completed requirement for all types of jigs was produced within six or seven months after the shop received its blueprints and construction specifications. Parts of old jigs such as support columns and beams were used over again in the construction of new jigs, whenever possible. 50X1-HUM

Breakdown of Shop No. 53

12. Each workshop was equipped with a plate jig (Konduktornaya plita) of various lengths. Shop No. 53 was divided into the following workshops:

a. Workshop No. 1. (Pervaya masterskaya) This workshop was equipped with approximately 80 different machines such as milling, grinding, planing, and lathe machines, electric cutters for cutting steel sheets, and electric saws for cutting aluminum sheets. From an unknown plant this workshop received horizontal steel beams and support columns for the wing and tail section jigs. These beams and support columns (Shveller) were U-shaped and were bridge welded. The workshop was also engaged in forming the ribs (Rubilniki) for the wing assembly jig. These wing jig ribs were cut out of Duralumin with the use of a

[redacted]

plywood templet, and then were shaped on milling machines. All attachment fittings (Uzly) for the jigs were also milled at this workshop.

b. Workshop No. 2. This workshop was equipped with a plate jig (Konduktornaya plita) 20 x two meters which was used for fitting aluminum brackets into the wing jig rib and into the wing jig socket, as well as fitting the brackets into the wing jig beams. The two stand machines (Stender stanok), which were similar to planing machines, were used for fitting the brackets (Vilki) into the steel socket (Stakan) of the wing jig rib and fitting the sockets into jig beams (Balka shtapelya). The brackets connecting the rib of a wing jig were cemented into the socket. Refer to page 20 for identification of the wing jig rib parts.

c. Workshop Nos. 3 and 4. These workshops were engaged in fitting clamp bolts (Prizhimnoy bolt) and slide rests (Dvizhok) to the rib of a wing jig, fitting sockets into the jig beams, and making build-up jigs for the aircraft tail section and the nose section of an aircraft.

d. Workshop No. 5. [redacted] This workshop made four types of jigs for the wing assembly, such as: small build-up jig for fitting and joining spars and ribs of the wing section (Lonzheronnyy shtapel), vertical jigs for wing panels, plane jigs for wing panels, and major assembly jigs for the wings.

e. Workshop No. 6. This workshop was engaged in the production of fuselage build-up jigs.

f. Workshop No. 7. The workers of this shop made fuselage build-up jigs from industrial steel tubes.

g. Workshop No. 8. This welding workshop used arc and oxy-acetylene welding equipment. The workers were engaged in bridge welding of jig support columns, and welding beams, fuselage jig tubes, and other angle brackets.

Labor Force

13. The total number of workers employed at Airframe Plant No. 30 was estimated to be 30,000 for all shifts. The majority of shops were operated in two shifts. [redacted] the totals per shop include both types of labor. [redacted] the following breakdown of shifts and number of workers for the jig construction Shop No. 53.

Workshop No. (Masterskaya)	Total of Workers	No. of shifts.
No. 1	150	2
No. 2	30-32	1
No 3	30-32	1
No. 4	30-32	1
No. 5	30-32*	1

[redacted]

[redacted] 50X1-HUM

Workshop No. (Masterskaya)	Total of workers	No. of shifts
No. 6	30-32	1
No. 7	30-32	1
No. 8	15	1

*During heavy workload periods when the new jigs were being constructed, the total number of workers for this workshop was increased to 75 by the addition of workers from other shops of the plant.

14. The following work hours prevailed at Plant No. 30:

From Monday through Friday:

First shift - 0730 to 1615 hours with 45 minutes for lunch time.
Second shift - 1615 to 0030 hours with 30 minutes for snack.

Saturdays:

First shift - 0730 to 1330 hours.
Second shift - 1330 to 1730 hours.

Administrative personnel worked in one shift from 0800 to 1700 hours, with one hour for lunch, and from 0800 to 1400 hours on Saturdays.

15. During slack periods at the plant many workers were sent to work on collective farms or to work as housing construction labor. These workers were paid in goods by collective farms and in cash by construction projects, in addition to receiving their regular wages from Plant No. 30. The plant wages were averaged out from the preceding three months earnings.

Transportation facilities

16. Plant No. 30 had approximately 200 vehicles most of which were trucks ranging from one and one-half to ten tons. A single track railroad spur (point 74, page 17) branched off the main railroad line (Belorusskiy station) into the plant territory. [redacted] 50X1-HUM

Miscellaneous

17. [redacted] the Airframe Plant No. 1 in Kuybyshev to construct new fuselage build-up jigs for an unknown type of aircraft. This fuselage jig was approximately 18 meters in length and three meters in diameter, and was somewhat longer than those for IL-14 aircraft. Other workers from Plant No. 30 (Shop No. 53) worked for two months at Kuybyshev Airframe Plant, [redacted] the fuselage jig had been taken apart since that plant was ordered to produce agricultural combines. 50X1-HUM 50X1-HUM

Experimental Plant No. 51 (Opytnyy Zavod No. 51)

18. The Experimental Plant No. 51 was located on the southern perimeter of the

[redacted] 50X1-HUM

50X1-HUM

[redacted]

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Attachment II

50X1-HUM

Airframe Plant No. 30 territory, and adjacent to the foundry of Plant 30. (For pinpoint location refer to point 65, page 17). [redacted] the buildings of this plant and all information was based on external observations [redacted] During 1948 and 1949 [redacted] three or four V-1 and V-2 rockets in the territory of Plant No. 51 [redacted] workers of Plant No. 30 referred to Plant No. 51 as 'aviatsionnyy opytnyy zavod' and that its activities continued to be in missile experimentation. [redacted]

Soviet Personalities 50X1-HUM 50X1-HUM

19. [redacted] the following supervisory personnel employed at Airframe Plant No. 30:

(1) VORONIN, Pavel Andreyevich. [redacted] the director of Plant No. 30 [redacted] 50X1-HUM

(2) SOLNTSEV (fnu). Chief of personnel section at Plant No. 30.

(3) SHAPIROV (fnu). Chief engineer of Plant No. 30 from 1953 to 1956.

(4) SOKOLOV (fnu). [redacted] 50X1-HUM [redacted] the chief mechanic of Plant No. 30. [redacted]

(5) KORBAKOV (fnu). [redacted] the position of chief mechanic of the plant.

(6) KOROLEV (fnu). He was the chief of Shop No. 31, (formerly No. 6). 50X1-HUM

(7) POPOV (fnu). He was the chief of Shop No. 39 [redacted]

(8) IVANOV (fnu). He was the chief of Shop No. 63, (formerly No. 31) 50X1-HUM

(9) BUROV, Mikhail Vasilevich. [redacted] [redacted] an assistant to the shop chief DEMIN, Aleksey Ivanovich.

[redacted]

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50X1-HUM

[redacted] Attachment II

50X1-HUM

(10) DEMIN, Alekscy Ivanovich. [redacted] chief of Shop No. 53.

(11) GLADKOV (fnu). He was the foreman of Workshop No. 1 of Shop No. 53.

(12) GLUKHOV (fnu). He was the senior mechanic of Workshop No. 1 of Shop No. 53.

(13) ZDOVNIKOV (fnu). He was the foreman for Workshop Nos. 3 and 4, Shop No. 53.

(14) KORCHARIN (fnu). He was an assistant to ZDOVNIKOV and senior mechanic for Workshop Nos. 3 and 4, Shop No. 53.

(15) MONAKHOV, Nikolay Semeonovich. [redacted] 50X1-HUM the senior mechanic in the same workshop.

(16) NEDOINKIN, Volodya. [redacted] he was a senior technical inspector in O.T.K. of Shop No. 53 [redacted] 50X1-HUM

(17) SAVELEV, Ilich. He was the foreman of Workshop No. 6 of Shop No. 53.

(18) SERGIN (fnu). He was the foreman of Workshop No. 7 of Shop No. 53.

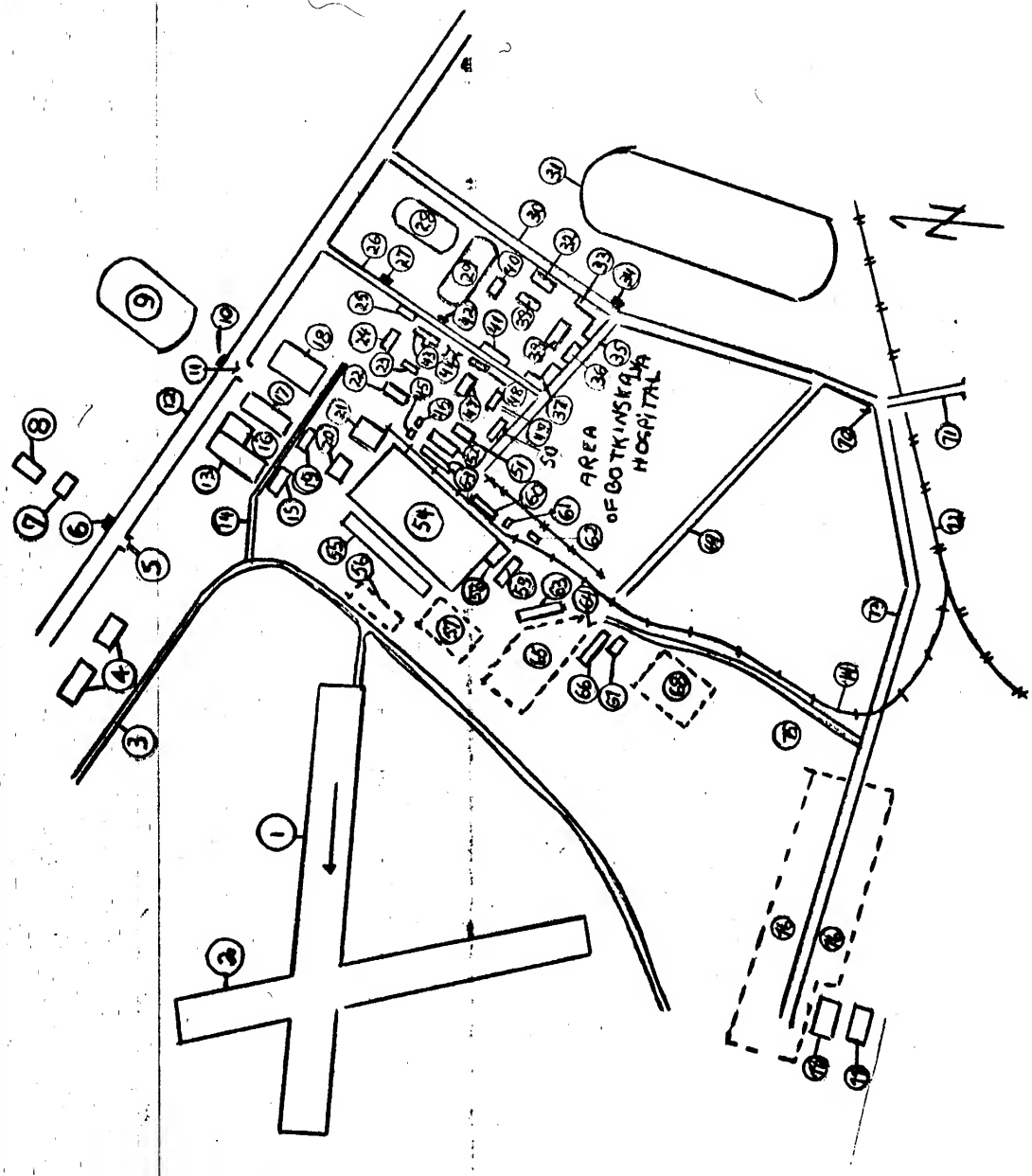
(19) TRIKOV, Alekscy Ivanovich. He was the foreman of Workshop No. 8 of Shop No. 53.

[redacted] 50X1-HUM

OVERLAY. MOSCOW

[redacted] Scale 1:17,400

50X1-HUM



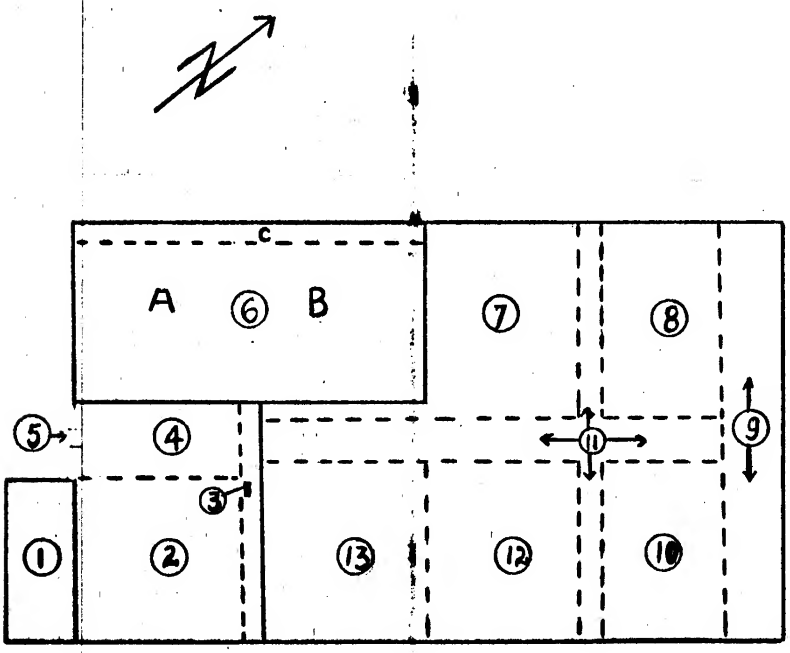
50X1-HUM

50X1-HUM

[redacted]

50X1-HUM

[redacted] Sketch of Layout of Shops, Main Production Building
Airframe Plant No. 30, Moscow
(not to scale)



50X1-HUM

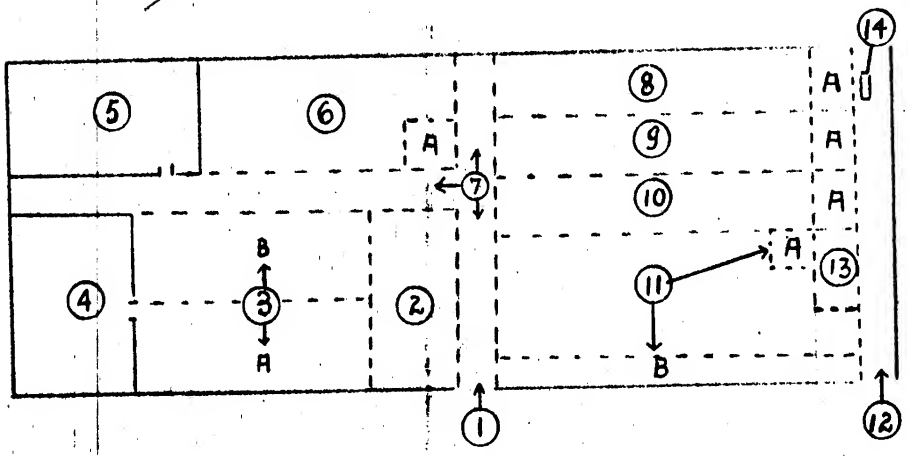
[redacted]

50X1-HUM

[redacted]

50X1-HUM

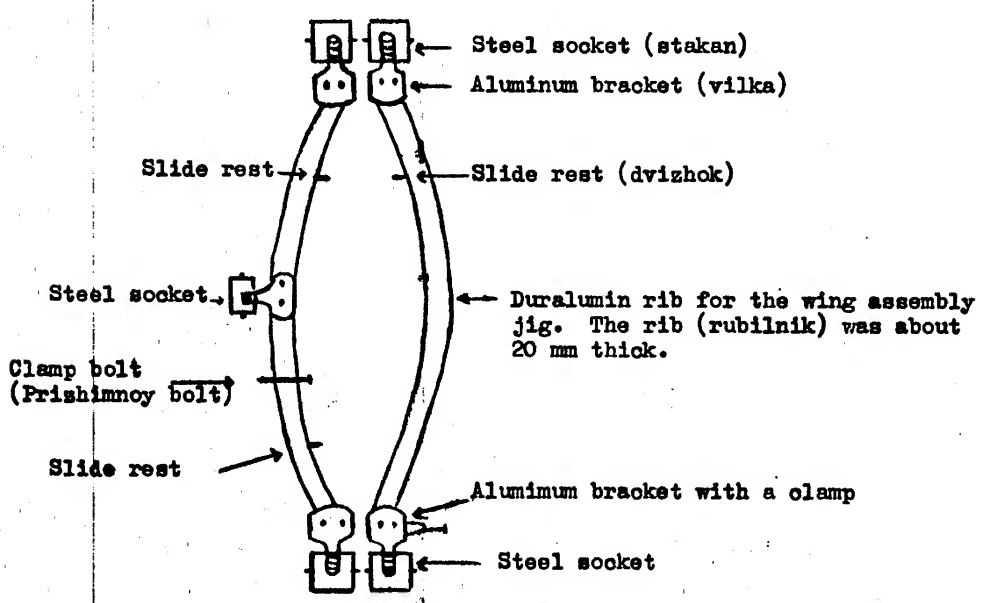
[redacted] Sketch of Layout of Shop 53, Jig Construction Shop (Main Production Building) Airframe Plant No. 30 Moscow. (not to scale)



50X1-HUM

[redacted]

Sketch of a rib for the wing major assembly jig.



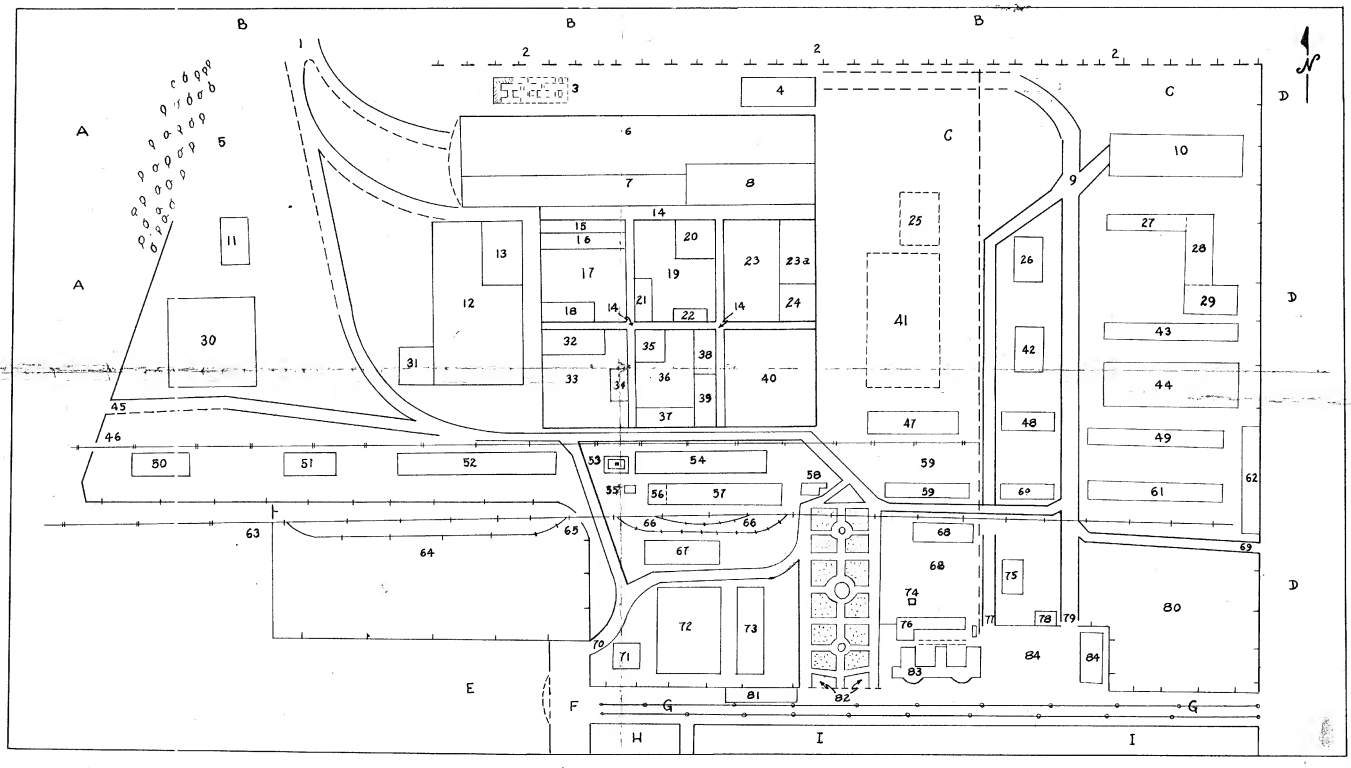
50X1-HUM

CONFIDENTIAL

50X1-HUM

Attachment

50X1-HUM



50X1-HUM

Sketch of Aviation Plant
30 in Moscow
Scale 1:3000

CONFIDENTIAL

50X1-HUM